SYNCALC DEMO

MDC RCC
ATARI SIG
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What's a Spreadsheet?

A Spreadsheet is a program that helps you solve problems commonly solved with paper, pencil and calculator. The computer screen is your "paper"; the cursor is your "pencil"; and the program itself is the calculator.

What's it good for?

It's great for things that need lot's of recalculation, applications that need to be done quickly or problems that otherwise do not justify writing a special program. Some examples would include: calculating sales projections, income taxes, financial ratios, your personal budget, loan comparisons, and balancing your checkbook. When your done playing "what-if" with your data, you can then print out the results.

What's it look like?

Your sheet (or screen) is organized as a grid of columns and rows. Where the columns and rows intersect defines the thousands of entry positions or cells. Each cell can hold three kinds of information: text, numeric data, or a formula to be calculated.

Where's the power?

The power in a spreadsheet lies in the fact that the computer remembers the formulas and calculations as you work through a problem. If you change a data entry on the spreadsheet, all related numbers and formulas are automatically recalculated.

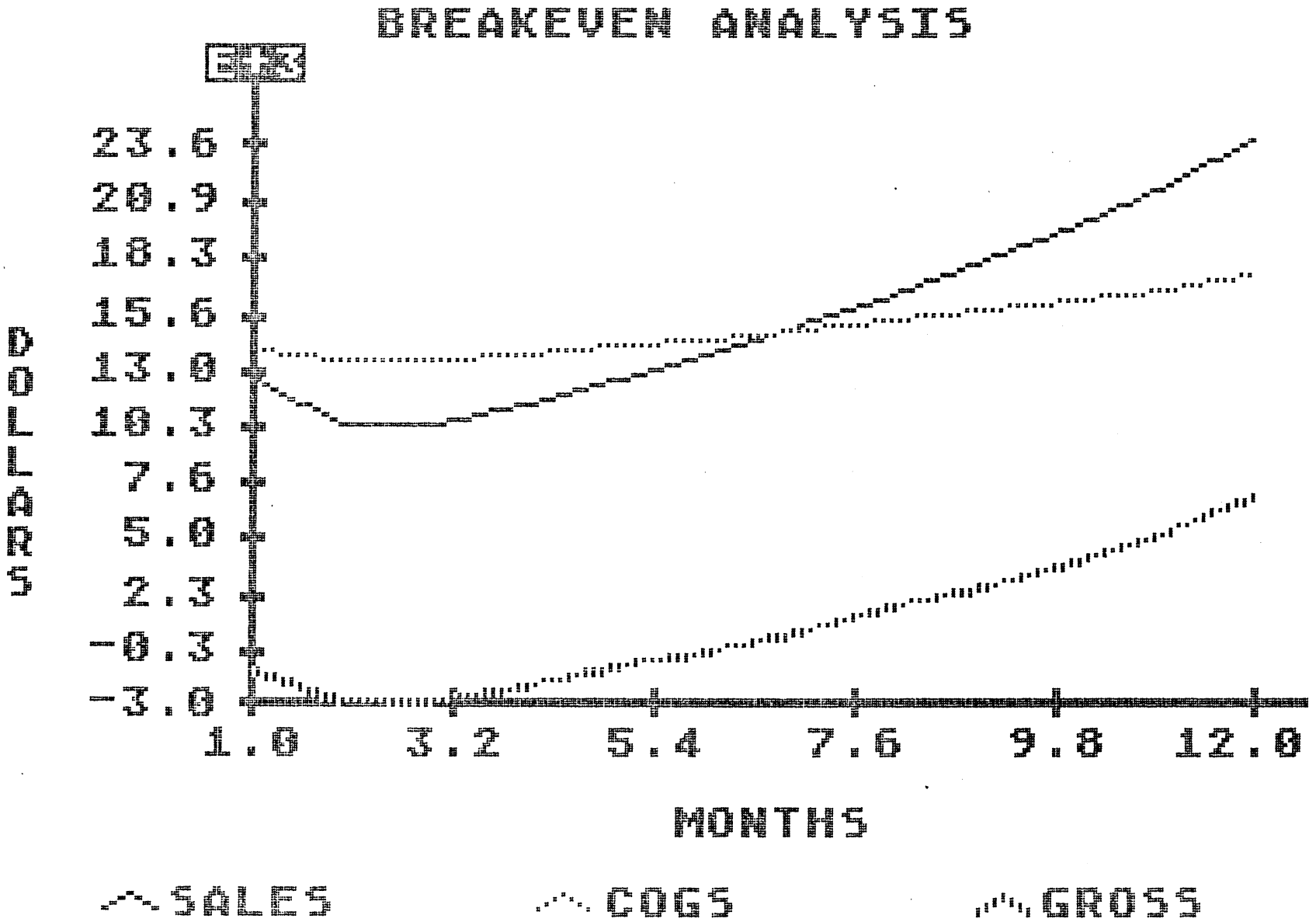
What about interchanging data?

There is a data interchange format called "DIFF" that allows you to save any range of rows or columns to a file on disk. Graphing or Data Base programs can then be used to further analyze the data. DIFF data can also be read into to the spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2	BREAK EVEN ANALYSIS EXAMPLE												
3													
4	MONTH	1	2	3	4	5	6	7	8	9	10	11	12
5													
6	SALES	$12000	$10000	$10000	$11000	$12100	$13310	$14641	$16105	$17716	$19487	$21436	$23579
7	VAR COSTS	$3600	$3000	$3000	$3300	$3630	$3993	$4392	$4832	$5315	$5846	$6431	$7074
8	FIX COSTS	$10000	$10000	$10000	$10000	$10000	$10000	$10000	$10000	$10000	$10000	$10000	$10000
9	COGS	$13600	$13000	$13000	$13300	$13630	$13993	$14392	$14832	$15315	$15846	$16431	$17074
10	GROSS	-$1600	-$3000	-$3000	-$2300	-$1530	-$683	$249	$1274	$2401	$3641	$5005	$6506

```
A1
A2 BREAK EVEN ANALYSIS EXAMPLE
A4 MONTH
A6 SALES
A7 VAR COSTS
A8 FIX COSTS
A9 COGS
A10 GROSS
B1
B2 N ANALYSI
B4 1
B6 12000
B7 0.3*B6
B8 10000
B9 B7+B8
B10 B6-B7-B8
C2 S EXAMPLE
C4 B4+1
C6 10000
C7 0.3*C6
C8 10000
C9 C7+C8
C10 C6-C7-C8
D4 C4+1
D6 10000
D7 0.3*D6
D8 10000
D9 D7+D8
D10 D6-D7-D8
E4 D4+1
E6 1.1*D6
E7 0.3*E6
E8 10000
E9 E7+E8
E10 E6-E7-E8
F4 E4+1
F6 1.1*E6
F7 0.3*F6
F8 10000
F9 F7+F8
F10 F6-F7-F8
G4 F4+1
G6 1.1*F6
G7 0.3*G6
G8 10000
G9 G7+G8
G10 G6-G7-G8
H4 G4+1
H6 1.1*G6
H7 0.3*H6
H8 10000
H9 H7+H8
H10 H6-H7-H8
I4 H4+1
I6 1.1*H6
I7 0.3*I6
I8 10000
I9 I7+I8
I10 I6-I7-I8
J4 I4+1
J6 1.1*I6
J7 0.3*J6
J8 10000
J9 J7+J8
J10 J6-J7-J8
K4 J4+1
K6 1.1*J6
K7 0.3*K6
K8 10000
K9 K7+K8
K10 K6-K7-K8

L4 K4+1
L6 1.1*K6
L7 0.3*L6
L8 10000
L9 L7+L8
L10 L6-L7-L8
M4 L4+1
M6 1.1*L6
M7 0.3*M6
M8 10000
M9 M7+M8
M10 M6-M7-M8
```


BREAKEVEN ANALYSIS
23.6
20.9
18.3
15.6
13.0
10.3
7.6
5.0
2.3
-0.3
-3.0
DOLLARS
1.0
3.2
5.4
7.6
9.8
12.0
MONTHS
SALES
COGS
GROSS

1984 FEDERAL INCOME TAX - FORM 1040

	EXEMPTIONS	
6e	Total Exemptions = 4	
	INCOME	
7	Wages	$18,000
8	Interest	$325
9a	Dividends	$25
c	Exclusion	$0
10	Tax Refunds	$85
11	Alimony	$1,000
12	Business Income	$0
13	Capital Gain	$0
14	40% Cap. Gain	$0
15	Supp Gains	$0
16	Taxable Pensions	$0
17b	Other Pen. Taxable	$0
18	Rents, Etc.	$0
19	Farm Income	$0
20b	Taxable Unemployment	$0
21b	Taxable Soc. Sec.	$0
22	Other Income	$0
23	TOTAL INCOME	$19,435
	ADJUSTMENTS TO INCOME	
24	Moving Expense	$0
25	Emp. Bus. Exp.	$483
26a	Ira Deduction	$1,000
27	Keogh (H.R.10)	$0
29	Alimony Paid	$0
30	Couple Deduction	$0
31	TOTAL ADJUSTMENTS	$1,483
32&33	ADJUSTED GROSS INCOME	$17,952
	TAX COMPUTATION	
34a/b	Itemzd Ded. (Sch A)	$7,881
35	Net Income	$10,071
36	Exemption Value	$0
37	Net Taxable Income	$10,071
38	Tax	$1,007
39	Additional Taxes	$0
40	TOTAL TAX	$1,007
41-50	TAX CREDITS	$0
51-55	OTHER TAXES	$0
56	TOTAL TAX	$1,007
	PAYMENTS	
57	Tax Witheld	$1,567
58-60	Other Taxes	$0
61	Excess FICA	$0
62-63	Misc Taxes	$0
64	TOTAL PAYMENTS	$1,567
	REFUND OR AMOUNT OWED	
65	OVERPAID	$560
68	OWED	-$560

ITEMIZED DEDUCTIONS - Schedule A

1-5	Medical Expenses		
	TAXES PAID		
6	State & Local	$333	
7	Real Estate	$2,345	
8	Sales Tax	$654	
9	Other Taxes	$45	
10	TOTAL TAXES PAID	$3,377	$3,377
	INTEREST PAID		
11	Home Mortgage	$2,000	
12	Charge Account & UE	$234	
13	Other Interest	$45	
14	TOTAL INTEREST PAID	$2,279	$2,279
	CONTRIBUTIONS		
15	Church	$1,200	
	ECCS	$333	
16	Other	$567	
17	Carry Over	$0	
18	TOTAL CONTRIBUTIONS	$2,100	$2,100
19	CASUALTY AND THEFT...	$0	$0
	MISCELLANEOUS DEDUCTIONS		
20	Union & Profes'l Dues	$100	
21	Tax Return Prep. Fee	$25	
22	Other	$0	
	Publications	$0	
	Books	$0	
	School	$0	
23	TOTAL MISCELLANEOUS		$125
24	Total Deductions	$7,881	
25	Std. Deduction	$0	
26	TOTAL DEDUCTION	$7,881	$7,881

INTEREST AND DIVIDEND INCOME - Schedule B

	INTEREST INCOME		
1	Seller Fin. Mortg.	$0	
2	Other		
	Roosevelt Dederal S&L	$0	
	Missouri Savings	$0	
3	TOTAL INTEREST	$0	$0
4-10	DIVIDEND INCOME	$0	$0

MISSOURI INCOME TAX 1984

9	Exemptions	$3,000
10c	Gross Income	$17,952
12	Deductions	$0
13	Federal Tax	$1,007
14	1040 47+52+53+55	$0
15	Exemptions	$0
16	Total Deductions	$1,007
17	Taxable Income	$16,945
18c	TAX	$792
19c	Resident Credit	$0
20c	Non Resident %	$0
21c	Balance	$792

CREDITS

22a	State Tax Withheld	$0
22b	Est. Tax Payments	$0
22c	Seniors Tax	$0
22d	Form 60 Extension	$0
23	Total Credits	$0
24	BALANCE DUE	-$792
25	OVERPAID	$792
26a	REFUND	

SCHEDULE 1 MISSOURI

10a	Gross Income		$17,952
ADDITIONS:			
10b	Add'l Interest	$0	
10c	PFSO	$0	
10d	TOTAL		$17,952
SUBTRACTIONS:			
10e	Fed Exe. Int.		$0
10f	Mo. Tax Ref.		$0
10g	PFSO		$0
10h	TOTAL		$0
10i	Adj. Gross Inc.		$17,952

SCHEDULE 2

12a	Total Fed Deductions	$7,881
12b	1984 Fica	$2,533
12c		
12d		
12e		
12f		
12g		
12h		
12i	TOTAL	$10,414
12k	City Tax	$0
12l	Net	$10,414
12m	MO. Deductions	$10,414

SynCalc Review

by Ron Robinson

SynCalc is a very flexible and easy to use electronic spreadsheet program produced by Synapse Software for the Atari computer. The program should prove useful for a wide range of home and business applications. Typicial uses may include: income taxes, home budgets, check book balancing, personal investing, loan and mortgage analysis, sales projections, cost estimates, business forecasting, financial ratios, or engineering modeling and analysis. It combines the functions of pocket, financial, and engineering calculators with the memory, storage, electronic screen, and printing resources of an Atari computer.

SynCalc ($79.95) is a member of a series of so called Integrated Software Packages offered by Synapse. The series additionally consists of: SynFile+ ($79.95) database manager, SynTrend ($79.95) graphing & statistics combination, SynStock ($59.95) investment portfolio manager, SynChron ($39.95) desktop calendar, and SynComm ($39.95) modem software. SynCalc can also generate disk files compatible with AtariWriter and VisiCalc. These packages are typically discounted 30% to 40% off list cost. They all require an Atari Computer with at least 48k of memory (Axlom Rampower 128k and Mosaic 64k Select compatible) and a disk drive.

A spreadsheet is a software tool designed to work with tables of data. The table is organized as a grid of columns and rows. The intersection of rows and columns are the entry positions or cells of data. The data may consist of an alphabetic label, a number value, or a formula to be calculated.

There are two major concepts that give spreadsheets their power. The first is the ability to make the contents of any cell dependent upon the contents of any other cell. This allows the contents of any one position to be automatically copied to any number of successive positions on the worksheet. This also allows you to sum, average, or otherwise mathematically manipulate ranges of cells.

The second is the ability to change any entry in the table, and then automatically recalculate all relevant formulas and redisplay the results. This feature, typically referred to as "what if" analysis, is particularly useful for planning and forecasting since it allows you to experiment with a range of alternatives and instantly see the results.

SynCalc is more versatile and easier to use than VisiCalc. Spreadsheet size can be up to 128 columns across and 256 rows down. The major functional additions over VisiCalc is an IF THEN ELSE function that can be logically based on AND, OR, or NOT conditions, plus the ability to widen any column that is too narrow for what you want to put inside it.

The program is really much more comparable to the spreadsheet portion of Lotus 1-2-3 on the IBM PC, except SynCalc is much easier to learn. The ease in learning can be attributed to the pop-up menus that appear when you depress the OPTION key. Items on the menu are picked using the arrow keys. The menus are great for the folks who would rather try something and see what happens than read the manual! Another nice feature is the automatic display of the expert user commands. When using the menus, the key strokes that would generate the same function are displayed in the upper left corner of the screen. Thus the program teaches you the shorthand notation to do things more quickly as you gain more experience. The top line also displays information indicating the current cell cursor position, any Error Messages resulting from incorrect key strokes, and the amount of memory available for data storage.

Some other useful features of SynCalc include:

1) The ability to view two parts of the worksheet on the display screen at the same time using windows. This allows you to work with two sections of the sheet at the same time, changing formulas and data as desired.

2) The cursor remembers the last direction it moved. After making the entry and pressing RETURN, the cursor automatically advances to the next cell position based on the last direction. This speeds the entry of columns of figures.

3) The program automatically detects numeric and text entry based on the first key typed. If it is alphanumeric, text entry mode is performed, if it is a number or numeric operator, numeric mode is entered.

4) The screen and entry windows change color depending upon the mode you are working in.

5) Screen formating commands that allow:

a. Left, centered and right justification of cell entries.

b. Automatic "%" and "$" insertion.

d. The number of places to the right of the decimal place to display. The default is two.

e. Margin size of each cell, column or row.

f. Comma insertion every three digits left of the decimal point.

g. Minus sign indication using a leading minus sign, debit/credit, or bracketed with parenthesis.

h. Scientific, engineering, floating or fixed number types

i. The ability to protect cells from certain operations such as value recalculation or entry.

j. Printer control characters may be inserted in the spreadsheet.

6) Cell calculations by referencing labels instead of cell addresses. This relative addressing scheme can eliminate the need to keep track of the absolute cell labels.

7) Built-In Functions include: **Trigometric;** ABS, ACOS, ASIN, ATAN, COS, EXP, INT, LN, LOG, PI, SIN, SQRT, TAN, , **Financial;** FV (future value), NPV(net present value), PMT (payment), **Statistical;** AVG, CNT, MEAN, MIN, MAX, RNG (range), SD (standard deviation), SUM, and VAR (variance), **Special;** IF *condition* THEN ELSE (where *condition* is AND, OR, NOT), LOOKUP (table lookup), SORT, COPY, MOVE, INSERT, DELETE, ERASE, GOTO, PRINT, TITLES, HEADINGS, SAVE worksheet - data or text, WIDTH, RECALC, and disk file functions.

SynCalc can turn your Atari into a serious and versatile business machine. It is easily the best software package this writer has used on the Atari. The performance, user interface, and documentation are comparable to some of the best IBM PC packages available at much greater cost. Very good use is made of the Atari graphics capabilities. The only criticism would be the lack of an "undo" command to allow recovery from keyboard entry errors, and the inability to specify filename extensions when saving files to disk. A final complaint would be against the $20 Synapse charges for back-up disks.

REFERENCES:

Ciraolo, Mike, **Syntegrated Software**, Antic, February 1985, Vol. 3, Number 10.

Harms, K. W., **Income Tax Spreadsheet**, Antic, February 1985, Vol. 3, Number 10.

Silva, Mike, **SynCalc Advanced Electronic Spreadsheet Manual**, Synapse, 1983.